

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/002447

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 E01B7/12		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 E01B		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 1 461 701 A (PSILANDER) 10 July 1923 (1923-07-10) page 1, line 36-108; figures 1-4	1,2,10, 12,13
A	GB 02608 A A.D. 1911 (EDGAR ALLEN AND COMPANY, LTD.) figures 1-4	1,8
A	EP 1 138 830 A (BWG BUTZBACHER WEICHENBAU GMBH CO. KG) 4 October 2001 (2001-10-04) cited in the application paragraphs '0024!-'0034!; figures 1-4	1
<div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex. </div>		
<div style="display: flex;"> <div style="flex: 1;"> <p>* Special categories of cited documents:</p> <p>*A* document defining the general state of the art which is not considered to be of particular relevance</p> <p>*E* earlier document but published on or after the international filing date</p> <p>*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>*O* document referring to an oral disclosure, use, exhibition or other means</p> <p>*P* document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="flex: 1;"> <p>*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>*Z* document member of the same patent family</p> </div> </div>		
Date of the actual completion of the international search <div style="text-align: center; font-weight: bold;">18 June 2004</div>		Date of mailing of the international search report <div style="text-align: center; font-weight: bold;">24/06/2004</div>
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer <div style="text-align: center; font-weight: bold;">Kergueno, J</div>

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Information on patent family members

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 1461701	A	10-07-1923	NONE	
GB 191102608	A		NONE	
EP 1138830	A	04-10-2001	DE 10015508 A1	04-10-2001
			DE 10015522 A1	04-10-2001
			EP 1138830 A2	04-10-2001
			EP 1138829 A2	04-10-2001